

Application No: 09/627,190
Attorney's Docket No: US 000064

REMARKS/ARGUMENTS

Applicant acknowledges receipt of the Office Action dated 11/09/2005. Claims 1, 4-9, 12-17 and 19-25 were pending in the application. Claims 1, 4, 6-9, 12-17 and 19-25 are presented for reconsideration and further examination in view of the foregoing amendments and the following remarks and arguments.

By this Response and Amendment claim 1 has been amended to incorporate subject matter previously set forth in claim 5; claim 5 has been canceled; and, accordingly, claim 6 has been amended to now depend from claim 1 instead of claim 5. As amended, the rejection of claims 1, 4 and 21 under U.S.C. § 102(b) is traversed. The rejections of claims 6-9, 12-17, 19-20 and 22-25 under § 103(a) are also respectfully traversed.

Rejections under 35 U.S.C. §102

The Examiner rejected claims 1, 4 and 21 under 35 U.S.C. §102(b) as anticipated by Chan et al. (US Patent 5,127,051), hereinafter noted "Chan."

Applicant respectfully traverses the rejections.

However, in order to expedite the prosecution of the present application claim 1 has been amended to further differentiate the claimed invention over the cited prior art. Support for the amendment to claim 1 is found in the present application as originally filed, in particular in Figures 1A and 1B, at page 9, lines 3-8 of the specification, and in the originally filed claim 5. It is therefore submitted that the above amendment does not introduce any new matter within the meaning of 35 U.S.C. §132.

As amended, claim 1 is directed to a transmitter for transmitting a stream of known and unknown symbols through a transmission channel wherein, *inter alia*, said transmitted stream is received by a plurality of receivers, and a known symbol distribution controller is capable of determining a plurality of channel orders, L_1 through L_n , each channel order being associated with a corresponding one of said plurality of receivers.

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The test for anticipation under section 102 is whether each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131. The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Chan does not disclose "a plurality of receivers", as acknowledged several times by the Examiner in the Office Action (page 4, line 9; page 5, line 15; page 6, lines 1-2; page 8, lines 9-10). Applicant therefore submits that claim 1 is not anticipated by Chan because Chan does not teach each and every element as set forth in the claim. Accordingly, reconsideration and withdrawal of the rejection of claim 1 under §102(b) is respectfully requested.

It is submitted that claims 4 and 21 are also allowable because they depend from Claim 1, which is allowable over the cited art reference based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 9, 12, 17 and 22-25 were rejected under 35 U.S.C. §102(b) as anticipated by, or "in the alternative", under 35 U.S.C. §103(a) as obvious over Chan.

Claims 5-8, 13-16 and 19-20 were rejected under 35 U.S.C. §103(a) as obvious over Chan in view of Stuart et al. (US Patent 4,489,416), hereinafter noted "Stuart."

Applicant respectfully traverses the rejections.

As originally and presently claimed in independent claims 9 and 17, the present application is directed to a network comprising a transmitter and a **plurality of receivers**, and a method of transmitting a stream of known symbols and unknown symbols through a transmission channel to a first receiver according to an optimum distribution. The method also includes the steps of determining a plurality of channel orders, each channel order being associated with a corresponding one of the plurality of receivers; and determining a maximum one of the plurality of channel orders.

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As already stated before, and admitted by the Examiner in the Office Action, Chan does not disclose “a plurality of receivers.” The Examiner argues that “adding additional receivers would simply be a modification of Chan et al.’s invention and would be considered within the scope of the invention as claimed”, and cites (four times) “col. 14, line 64-col. 15, line 2” to support that assertion. However, there is no indication that adding multiple receivers would be within the scope of Chan’s invention. Col. 14, line 64-col. 15, line 2 in Chan simply reads:

“The specific embodiments of the invention described above are intended to be illustrative only, and many other variations and modifications may be made thereto in accordance with the principles of the invention. All such embodiments and variations and modifications thereof are considered to be within the scope of the invention, as defined in the following claims.”

This generic statement does not teach or suggest that a plurality of receivers would be within the scope of Chan’s invention. To establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, there must be a reasonable expectation of success.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant’s disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143-§2143.03 for decisions pertinent to each of these criteria.

Chan is directed to an adaptive modem system wherein “a transmitted data packet is formatted into successive frames.” (Col. 4:30-35) and an interpolation in time is performed to compute “an interpolated estimate of the channel response at a time position corresponding to a selected part of the data sequence.” (claim 13 at Col. 18:16-32)

Applicant submits that there is no teaching or motivation in Chan to modify Chan's invention by using multiple receivers. Additionally, there is no teaching or suggestion that modifying Chan as suggested by the Examiner would have a reasonable expectation of success. Finally, even if Chan's invention were modified as suggested by the Examiner, it would not result in the invention claimed in the present application. Adding additional receivers to Chan's invention as suggested by the Examiner would not yield a network comprising a transmitter and a plurality of receivers, and a method of transmitting a stream of known symbols and unknown symbols wherein, in a determined plurality of channel orders, **each order channel is associated with a corresponding one of said plurality of receivers**, as set forth in claims 9 and 17 of the present application. The determinations and optimizations in Chan are performed over a set of time positions, i.e. in a temporal dimension, whereas the determinations and optimizations in the present invention are performed over a plurality of receivers, i.e. in a spatial dimension. Applicant submits that these two dimensions are orthogonal by nature and one can not be an extension of the other. In other words, using multiple receivers with Chan's invention would not yield the present invention as claimed in claims 9 and 17, it would only provide Chan's invention individually repeated for each receiver.

It is therefore submitted that claims 9 and 17 are not obvious over the cited art reference.

Accordingly, reconsideration and withdrawal of their rejection is respectfully requested.

It is submitted that claims 12-16 and 22-23 are also allowable because they ultimately depend from claim 9, which is allowable over the cited art references based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

It is also submitted that claims 19-20 and 24-25 are also allowable because they ultimately depend from claim 17, which is allowable over the cited art references based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

Furthermore, Applicant submits that claim 1 as amended, which now incorporates the limitations previously set forth in claim 5, is not obvious over Chan for the same reasons that claims 9 and 17 are not obvious over Chan.

Regarding claims 5-8, 13-16 and 19-20, the Examiner again admitted that "Chan does not disclose a plurality of receivers" and relied upon Stuart for this feature. However, although Stuart shows a plurality of remote modems connected to a central modem, each remote modem is treated individually and sequentially, i.e. each remote modem receives from the central modem a set of coefficients that is particular to that remote modem. In Stuart, each set of coefficients is determined independently for each corresponding remote modem using the characteristics of each channel between the central modem and the given remote modem, independently of the characteristics of the other channels. In contrast, the present invention uses the plurality of receivers and their associated channels in combination to determine a plurality of channel orders, and to determine a maximum one of the plurality of channel orders. Accordingly, Applicant submits that Stuart does not cure the deficiencies of Chan, and therefore claims 5-8, 13-16 and 19-20 are not obvious over Chan in view of Stuart.

Applicant notes that claim 5 has been canceled and therefore its rejection under §103(a) has been rendered moot. However, claim 1 as amended now includes the limitations previously set forth in claim 5. Applicant therefore submits that claim 1 is not obvious over Chan in view of Stuart based upon the arguments presented for claims 5-8, 13-16 and 19-20.

It is submitted that claims 6-8 are also allowable because they ultimately depend from Claim 1, which is allowable over the cited art references based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

Additionally, it is submitted that claims 13-16 are also allowable because they ultimately depend from Claim 9, which is allowable over the cited art references based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

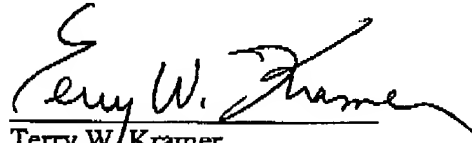
Finally, it is submitted that claims 19-20 are also allowable because they ultimately depend from Claim 17, which is allowable over the cited art references based upon the above arguments. Accordingly, reconsideration and withdrawal of their rejections is respectfully requested.

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While we believe that the instant amendment places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner telephone the undersigned attorney in order to expeditiously resolve any outstanding issues.

In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

Respectfully submitted,
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